

Evaluation of Alternative Potable Water Supply Village of Alden, New York

The Village of Alden (Village) is conducting an evaluation of alternative potable water supplies. Due to the recent drought conditions, the Village implemented a temporary emergency interconnection with Erie County Water Authority (ECWA) during the summer of 2016. Given that the drought-like conditions may continue, the Village has evaluated several options to establish a permanent interconnection with ECWA, or add an additional Village well.

The temporary emergency interconnection with ECWA on Exchange Street was installed and successfully supplemented the Village water supply to meet Village water demands from July to October 2016. The temporary interconnection was removed in November. The Village evaluated options to establish a permanent interconnection with ECWA. The evaluation, summarized in an engineer's report by Nussbaumer & Clarke Inc., includes potential permanent interconnection locations, estimated construction costs and a comparative water rate analysis. The potential permanent interconnection was evaluated for use ranging from supplemental to full supply. Several interconnection options were considered and evaluated in terms of feasibility, capital costs for construction of the interconnection, operating costs, and impact to the Village's water rate.

The installation of a permanent interconnection at Exchange Street for supplemental and emergency supply is recommended. The additional cost to the Village would be approximately \$1,700 on an annual basis for minimal water purchase. The estimated construction cost for the interconnection is \$80,000. The established connection would be capable of supplying full water demands if needed. Under this option, the Village's water rate of \$3.95 per 1,000 gallons is estimated to increase by \$0.08 to \$4.03 in order to pay for the ECWA purchased water and capital costs to build the interconnection.

The Village might choose to operate the interconnection at Exchange Street to purchase more than the minimal supply from ECWA. Should the Village choose to purchase 25% of their water supply from ECWA, the additional cost to the Village would be approximately \$43,500 annually. Under this option, the Village's water rate is estimated to increase by \$0.79 per 1,000 gallons to \$4.74. The cost to purchase minimal supply vs. 25% supply might realistically serve as the upper and lower limits of the Village's purchase of ECWA water under a range of conditions. The Village purchased approximately 25% of their supply from ECWA during drought conditions in 2016.

Consideration was also given to installing two permanent interconnections for full water supply at Broadway and Exchange Street (bulk purchase). An inline booster pump would be required at Broadway, increasing the estimated cost of construction to \$100,000 for the second interconnection. The annual cost to purchase water from the ECWA under this arrangement would be approximately \$232,500. The Village would realize expenditure reductions of only \$54,200 in operation and maintenance costs by abandoning use of Village wells and instead operating the interconnection. Overall, the Village would increase its annual expenditures by approximately \$178,300. Under this option, the Village's water rate is estimated to increase by \$3.13 per 1,000 gallons to \$7.21 in order to pay for all ECWA purchased water (including water lost throughout the Village system) and capital costs to build the interconnections. The full supply option is not recommended at this time.

Purchasing full supply of water from the ECWA or entering into a Lease Management or Direct Service agreement at this time would be very costly to the Village. Large capital costs would be associated with the required system upgrades under Lease Management or Direct Service (costs estimated to exceed \$2.3 million and \$4.3 million, respectively). If, in the future, system capital improvements are completed and operation costs were reduced, full use of the ECWA water supply would be more cost effective.

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The following table summarizes the results of the rate analysis considering connection with the ECWA for a supplemental or full water supply.

	Village Supply	Village Supply with Supplement from ECWA (Minimal Use)	Village Supply with Supplement from ECWA (25% Supply)	Full Supply from ECWA (Bulk Purchase)
Capital Cost	N/A	\$80,000	\$80,000	\$180,000
Annual Cost to Purchase ECWA Water	N/A	\$1,700	\$57,000	\$228,000
Annual Savings	N/A	N/A	\$13,500	\$54,200 (Chemical & Power Cost - Wells)
Water Rate Increase	N/A	Total: + \$0.08	Total: + \$0.79	Total: + \$3.13
Est. Village Water Rate per 1000 gal	\$3.95	\$4.03	\$4.74	\$7.08

The full engineer's report, including detailed discussion of interconnection options considered, rate structures, and requirements for conversion to lease management or direct service with ECWA, is available at the Village Hall. Please contact the Village Clerk, Terry Wachowiak, at 716-937-9216 for further information.